III. SURFACE WATER ASSESSMENT

B. Plan for Achieving Comprehensive Assessments

EPA has established a goal of comprehensively characterizing the waters of each state using a variety of sampling designs targeted to the condition of, and goals for, the waters. Over the past two years, DEM has developed a draft surface water monitoring strategy designed to support comprehensive assessment of Rhode Island's waters. When fully implemented it will support comprehensive assessment of all designated uses of surface waters by 2020. All waters would be assessed for aquatic life , recreational and shellfishing uses, as designated, by 2010.

The need for a comprehensive monitoring strategy has been formalized into state policy by passage of new legislation in 2004. State law created the Rhode Island Environmental Monitoring Collaborative (RIEMC) and charged it with developing and implementing a comprehensive monitoring program. The RIEMC consists of representatives of key state agencies involved in water monitoring programs and data management and dissemination. The RIEMC was further directed to work with a wide range of other interested entities including federal agencies, academic institutions, local entities including non-profits among others. The RIEMC held its first meeting in August 2004 and is working to develop a report to the legislature and Governor in January 2005.

Accordingly, the surface water monitoring strategy was developed to be responsive to both the new state law as well as federal guidance. The draft strategy is being reviewed by the RIEMC and is expected to be revised prior to January 2005, and then updated every three years thereafter.

The strategy currently incorporates water-related environmental indicators adapted from prior work conducted by the Partners for Narragansett Bay (PNB) and summarized in a report entitled " Ecological Indicators for Narragansett Bay and its Watershed" (Kleinschmidt, April 2003). The recommended indicators also reflect federal guidance regarding core and supplemental indicators. With respect to freshwaters, there will be more emphasis placed on biological indicators with an expectation that bioassessment may better reflect the influences of multiple stressors upon aquatic biological communities. Over time the strategy will incorporate indicators and strategies related to landscape conditions, wetlands, groundwater and sediments.

The strategy identifies a mix of sampling designs that when fully implemented will support the goal of comprehensive assessment and provide data to meet the needs of state water program managers. With respect to Narragansett Bay and other coastal waters, key strategies include the expansion of the network of fixed-site continuous monitoring stations, institution of rotating assessments of coastal ponds, coves and embayments and continuation of shellfish, bathing beach and marine fisheries monitoring programs. The strategy further recommends NBC continue its monitoring programs in the rivers (freshwater and estuarine) that are affected by the operation of its regional wastewater treatment system. Key concerns regarding estuarine water quality are better characterizing the extent of hypoxia and pathogen contamination.

With respect to rivers and streams, DEM plans to shift from reliance solely on a fixed-station monitoring approach to a rotating basin approach that is supplemented by additional targeted strategies. This is needed to eliminate the high percentage of river miles for which there is little to no data to support an assessment- currently 62%. Under the rotating basin approach, the state will be divided into seven assessment units consisting of watershed sub-basins. These

areas will be assessed once every five years in a comprehensive manner that integrates biological, chemical and physical parameters. This change is expected to yield more meaningful assessments that will facilitate the development of TMDLs and support other water protection programs. This approach will be supplemented with the maintenance of long-term monitoring at fixed-stations on the state's three largest rivers: Blackstone, Pawtuxet and Pawcatuck. This monitoring is critical to tracking the pollutant loadings entering Narragansett Bay and Little Narragansett Bay. Additionally, a targeted approach is proposed to systematically assess fish tissue contamination in rivers and streams. Rhode Island has never established an on-going program to address fish tissue and as a result it is a large gap in the available monitoring data.

Respect to lakes, the strategy recommends enhancing the capacity of the well-established URI-Watershed Watch Program that coordinates volunteer-based monitoring on a statewide basis. Additionally, a targeted sampling design to assess fish tissue will need to be established.

DEM intends that monitoring activities will be coordinated whenever feasible to support watershed-based assessment that integrate data from various monitoring programs. It is clear that additional resources will be needed to support implementation.